9500306

THER CONTRIBED SHAYLES OF ANTERICAL

TO ALL TO WHOM THESE: PRESENTS SHALL COME;

Agripro Seeds, Inc.

Microns, there has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR EPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR KING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN TED STATES SEED OF THIS VARIETY (I) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF ED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Rowdy'

In Testimony Alberton, I have hereunto set my hand and caused the seal of the Alant Unriety Arctician Office to be affixed at the City of Washington, D.C. this twenty-ninth day of March in the year of our Lord one thousand nine hundred and ninety-six.

Attest:

Marshe A. Stanton

Helistenan Bocrotary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all	l reproduction	ns.			FORM APPROVE	<u>:D - OMB NO. 0581-005</u>
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE DIVISION - PLANT VARIETY PROTECTION OFF			The following states 1974 (5 U.S.C. 552	ments are mad	le in accordance	with the Privacy Act of
APPLICATION FOR PLANT VARIETY PROTECTION	CERTIFICA		Application is requiremental certificate is to be it until certificate is is:	ssued (7 U.S.C	. 2421). Inform	plant variety protection nation is held confidentia
(Instructions and information collection burden stateme	ent on revers	se)	<u> </u>			
Hybritech US, a Monsanto Com	npany		2. TEMPORARY DESIG		3. VARIETY NA	ME
Agripro Seeds. Inc.	,		W91-091		ROW D	Υ.
	GM 01	Jun 190	8			
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and County	try}		6. TELEPHONE (include	e area code)	FOR OF	FICIAL USE ONLY
6700 Antioch P.O. Box 2962 Shawnee Mission, Kansas 66201-13	62		913-384-49		PVPO NUMBER 95	00306
		•	913-384-02		i S	£ 1995
7. GENUS AND SPECIES NAME	8. FAMILY NA	AME (Botanie	<u> </u>		G FIUNG AND	EXAMINATION FEE:
Triticum aestivum		ramine				6.00
9. CROP KIND NAME (Common name)	<u> </u>			······································	E DATE	
Hard Red Winter Wheat					E	1915
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATE COPPORATION	TION <i>(corporation</i>	n, partnershi	o, association, etc.) (Com	mon name)	C CERTIFICATION	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION			12. DATE OF INCORPOR	RATION	E DATE	
Delaware			June 1994		771, 23	5 1996
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERV	/E IN THIS APPL	LICATION A	NO RECEIVE ALL PAPERS		14. TELEPHONE	(include area code)
Robert Bruns 806 N. Second Street OR		Ber	istine Bruns thoud, CO	/	970-53 316 7	32-3721 55 7707
P.O. Box 30 Berthoud, Colorado		Hybi	-K J. Messm -iTech Us 2 North Me		970-5	32-2035
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow in:	structions on rev	(e)W;	chita KS	67204/	7 316	13 00 1 C
a. X Exhibit A. Origin and Breeding History of the Veriety b. X Exhibit B. Statement of Distinctness	/				email:	F Adams of 60
c. 🛛 Exhibit C. Objective Description of the Variety	Cgm	01]0	n 1998 ~		MA	T. Messmer® on santo, Com
d. 🛛 Exhibit D. Additional Description of the Variety				•	, , ,	or i year to i Coin
e. X Exhibit E. Statement of the Basis of the Applicant's Ownership						
f. Noucher Sample (2,500 viable untreated seeds or, for tuber propagated g. Killing and Examination Fee (\$2,450), made payable to "Treasurer of the				ed and maintaine	d in a public reposit	ory)
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY V				ED? (See Section	a 83(a) of the Plant	Variety Protection Act/7
X YES (If "yes," answer items 18 and 19 below)	□ NO Ø	if "no," go ti				· .
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED A GENERATIONS?	IS TO NUMBER (OF 18.	IF "YES" TO ITEM 18, W			
	ACED 11050 01	55555 505	XX FOUNDATION	REGISTERE		
	NO ,	FFEKED FOR	SALE, OR MARKETED IN	THE U.S. OR O	THER COUNTRIES?	
21. The applicant(s) declare that a viable sample of basic seed of the variety will be f	furnished with ap	plication an	d will be replenished upon	request in accord	dance with such req	sulations as may be
applicable, or for a tuber propagated variety a tissue culture will be deposited in The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or to Section 41, and is entitled to protection under the provisions of Section 42 of the	uber propagated	plant variety	and believels) that the v		tinct, uniform, and	stable as required in
Applicant(s) is(sre) informed that false representation herein can jeopardize protein			•			
SIGNATURE OF APPLICANT (Owner(s))			OF APPLICANT (Owner)	(s))		
IAME (Please print or type)						
Robert Bruns	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	NAME (Plea	se print or type)			
Research Manager 8/30	4.4	CAPACITY	OR TITLE			DATE
	I					

EXHIBIT A

ORIGIN AND BREEDING HISTORY OF ROWDY

Rowdy is an F3 derived single plant selection from the cross: [NDD 63 / CO652643 // Centurk /3/ McNair 4823] / [Morocco /4/ (F5#4) Era / Tobari // Lovrin 11 /3/ Mn6916 (C78-679) /5/ Marshall] // Hawk / Amigo /3/ W87-171-7 (Mesa sib). The cross was made in 1987. A plant selection based upon plant height, fertility, and absence of leaf rust was made at Berthoud, Colorado in 1989. The resulting F4 plant row was tested in preliminary yield trials in 1990 and has been subsequently tested in replicated yield trials from 1991 through 1994. These trials represent a fairly broad geographic area in the Hard Winter Wheat region. Rowdy is entered in selected official 1995 university trials and the Southern Regional Performance Nursery.

In 1992, 48 headrows were grown in Berthoud, Colorado. Twelve rows, phenotypically similar for plant height and maturity were harvested individually and grown in Berthoud, Colorado in 1993 as progeny rows. Five of these progeny rows were selected based on phenotypic similarity for height, maturity, awns and uniformity within row. These five rows were harvested and bulked to be grown as a 1.5 acre increase in 1994 which produced 4250 pounds of breeder seed.

Rowdy has been uniform and stable since 1993. Less than 0.8% of the plants were rouged from the breeder seed field in 1994. Approximately 60% of the rouged variant plants were taller in height (7 to 13 centimeters) wheat plants, 20% were awnletted wheat plants and 15% were blue wheat plants. Up to 0.8% variant plants may be encountered in subsequent generations.

EXHIBIT B.

NOVELTY STATEMENT

Rowdy is most similar to the hard red winter wheat Mesa. However, it can be easily distinguished by the following morphological characteristics:

- Rowdy has a square shoulder shape on the glume, (as recorded in Berthoud, Colorado from 1991 thru 1994). Mesa has an oblique to round shoulder shape on its glume, (as recorded in Berthoud, Colorado from 1984 thru 1994).
- Rowdy has long brush hairs on the seed, (as recorded in Berthoud, Colorado from 1991 thru 1994). Mesa has short brush hairs on the seed, (as recorded in Berthoud, Colorado from 1984 thru 1994).

U.S DEPARTMENT OFAGRICULTURE AGRICULTURAL MARKETING SERVICE COMMODITIES SCIENTIFIC SUPPORT DIVISION BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY

WHEAT (Triticum Spp.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)	FOR OFFICIAL USE ONLY
Agripro Seeds, Inc.	PYPO NUMBER OF OO ZOC
ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)	9500306
6700 Antioch	VARIETY NAME OR TEMPORARY DESIGNATION
P.O. Box 2962 Shawnee Mission, KS 66201-1362	ROWDY
Place the appropriate number that describes the varietal character of this variety in the	
Place a zero in the first box (e.g. or) when number is either 99 or les	s or 9 or less.
1. KIND:	
1 1- COMMON 1- PURPLY 1 CT TO	
1 = COMMON 2 = DURUM 3 = CLUB 4 = OTHER (SPECIFY)	
2. VERNALIZATION:	
2 1 = SPRING 2 = WINTER 3 = OTHER (SPECIFY)	
2 1 = SPRING 2 = WINTER 3 = OTHER (SPECIFY)	
3. COLEOPTILE ANTHOCYANIN:	
1 = ABSENT 2 = PRESENT	
4. JUVENILE PLANT GROWTH:	
1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT	
5. PLANT COLOR (boot stage):	
2 1=VELLOW-GREEN 2=GREEN 3=RUIE GREEN	
1 = YELLOW-GREEN 2 = GREEN 3 = BLUE-GREEN 5. FLAG LEAF (boot stage):	
1	
1 = ERECT 2 = RECURVED	
2 1 = NOT TWISTED 2 = TWISTED	
7. EAR EMERGENCE:	
	
NUMBER OF DAYS EARLIER THAN	*
Number of days Later than Mesa (HRWW)	*
3. ANTHER COLOR:	
1	
1 = YELLOW 2 = PURPLE 2. PLANT HEIGHT (from soil to top of head, excluding awns)	<u> </u>
the same of the best and the same	
em. TALLER THAN	*
cm. SHORTER THAN	*

^{*} Relative to a PVP-approved commercial variety grown in the same trial.

13. SEED: A. S	НАРЕ	and the contract of the contra	* mm; 20076 (c. 1)	0500707
1	1 = OVATE 2 = OVAL	3 = ELLIPTICAL		9500306
R. C	HEEK			
1	1 = ROUNDED 2 = ANGUI	LAR		
C. B	RUSH			
3	1 = SHORT 2 = MEDIUM	3=LONG		
	1 = NOT COLLARED 2 = 0	COLLARED		
D. C	REASE			
1	1 = WIDTH 60% OR LESS OF 1 2 = WIDTH 80% OR LESS OF 1 3 = WIDTH NEARLY AS WIDE	KERNEL		
	1 = DEPTH 20% OR LESS OF H 2 = DEPTH 35% OR LESS OF H 3 = DEPTH 50% OR LESS OF H	KERNEL		
E. CO	DLOR	• .		
3	1=WHITE 2=AMBER 3	= RED 4 = OTHER ((specify)	
F. TE	XTURE			
1	1=HARD 2=SOFT			et familier en josept for det en
G. PH	ENOL REACTION (see instructio	ns)		
<u> </u>	1 = IVORY 2 = FAV 4 = DARK BROWN 5 = BLA		GHT BROWN	
. DISEASE:	(0 = NOT TESTED; 1 = SUSC	CEPTIBLE; 2=RE	SISTANT) 3= good	tolerance 4=moderate toleranc
3	STEM RUST (Res. genes)	. 3	LEAF RUST (Res. genes)	
0	STRIPE RUST (Res. genes)	. 0	LOOSE SMUT (Res. genes)	
3	MILDEW (Res. genes)		BUNT (Res. genes)	•
, 0	Septoria nodorum (Res. genes)	. 0	Septoria tritici (Res. genes)	
0	BYDV (Res. genes)	3	WSMV (Res. genes)	
4	SBMV (Res. genes)	3	SSMV (Res. genes)	· · · · · · · · · · · · · · · · · · ·
	OTHER			,

Exhibit C (Wheat)	ago 4	•
15. INSECT:	(0 = NOT TESTED; 1 = SUSCEPTIBLE; 2 = RESISTANT	950030
1	HESSIAN FLY (Res. genes) Great Plains	
0	STEM SAWFLY (Res. genes)	<u> </u>
0=	CEREAL LEAF BEETLE (Res. genes)	
0	APHIDS (Res. genes)	
	GREENBUG (Res. genes)	
0	RUSSIAN APHID (Res. genes)	
0	OTHER (specify)	

EXHIBIT D.

ADDITIONAL DESCRIPTION OF ROWDY

Rowdy is a hard red winter wheat bred and developed by Agripro Seeds, Inc. Rowdy is a high yielding, strong strawed, short semidwarf with medium-early maturity. Rowdy has good tolerance to leaf rust, and Spindle streak mosaic virus.

Juvenile growth habit is semierect. Plant color at boot stage is green. The flag leaf is erect and twisted. Auricle hairs and auricle anthocyanin are present. Waxy bloom is present on the stem, flag leaf sheath and head. The head is tapering, awned and middense. Glumes are midlong and narrow with square shoulders and acuminate beaks. Seed shape is ovate with rounded cheeks.

Rowdy is well adapted to western Kansas, Nebraska, Oklahoma, Colorado, and Texas.

ACRUPRO WHEAT HARD RED VINTER WHEAT ROWDY VS HAWK

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FLOUR/WHEAT QUALITY	FIR		*	: :	72.3	88. 8.8	71.2	20.00	2		73.5	69.0	70.2	9.02	2	
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*	FIR	FROT	14%nb		10.9	13.0	13.3	10 4			10.7	11.9	12.3	11 6		
i	WAT	HOT	14%mb		11.6	13.8	14.4	12.2			11.5	12.9	13.4	10 6	2	
		YEAR-LOC			93-TI	92-SK	91-NO	AVARBACT			93-TI	92-SK	01-16 -	AVARBACE		

63.0 4 63.0 4 3 4.8 742 6 1 5.0 1116 3 68.6 4 71.1 1 88 12.2 4 11.9 5 W91-091RowdyTI-00407 13.1 HAUK TI-00401 13.1 88

8-9=UNACCEPTABLE 5=ACCEPTABLE 6-7=QUESTIONABLE 3-4=G00D RATINGS: 1-2=EXCELLENT

AGRIPRO HARD RED WINTER WHEAT TRIAL SUMMARY

	1991 (5)		1992-94 (37)	(37)							LEAF	بنا	STEM	3				
VARIETY/	YIELD	T.W.T.	•	T.W.T.						STRAW	RUST	ST	RUST	; - -				: .
LINE	(BU/A)	LB/BU	\neg	LB/BU	呈	ANTH	Ψ	COLEO	보	BU/A) LB/BU HD ANTH MT COLEO HT STRNTH	တ	œ	Ø	م	ĭ H	S R PM HF WSMV SBMV WSSMN	SBMV	WSSMV
Rowdv																		
W91-091	76.1	60.0			4	4	4	ß	C4	ч	Cł	7	(5)	N	9	4	¥C	es
VICTORY	76.5	59.6			ĸ	w	60	ĸ	4	.4	8	ო	7			. 00	e 5	,
ABILENE	68.4	609		,	ø	7	8	ĸ	ო	~ ~1		, wo	. op	· 10		, so) e	1 4
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W91-091 Rowdy	φ		71.4	60.6	4	4	4	w	8	~	~	8	63	N.	6	4	G	67
TOMAHAWK			68.8	59.3	4	ιņ	4	4	4	4	8	m	62	9	æ	· 60	e en	. 4
ABILENE			65.1	59.9	ထ	7	9	w	6	7	4	60	9	 	60	• •	, w	. 4
																		•

Data generated in 1991:

Berthoud, CO - Yield, Test Wt., Helght, Heading, Coleopilie (grnhse), Leaf Rust (field & grnhse), Stem Rust (field & grnhse), Hesslan fly (grnhse)

Nardin, OK - Yield, Test Wt., Heading

Wichita, KS - Yield, Test Wr., Heading, Maturity, Tan Spot

Salina KS - Yield, Test Wit., Leaf Rust

Everest, KS - Yield, WSSMV

mperial, NE - Yield, Leaf Rust

Geneva, NE - Leaf Rust

Dumas, TX - Yield, Test Wr., Heading, Shatter Burlington, CO - Yield, Test Wit.

Hays, KS - WSMV (visual screening, Dr. T.J. Martin, KSU)

Data generated In 1992:

Berthoud, CO - Yield, Test Wt., Height, Heading. Lodging Severity, Coleoptile (grnhse), Leaf Rust (field & grnhse), Stem Rust (field & grnhse), Tan Spot (grnhse), Hessian fly (grnhse)

Nardin, OK - Maturity, Lodge Breakage, Leaf Rust

Wichita, KS - Test Wt., Height, Leaf Rust, Septorla

Rome, KS - Yield, Test Wt., WSSMV

Salina, KS - Yield Test Wit., Leaf Rust Garden City, KS - BYDV

Imperial, NE - Yield

Dumas, TX - Yield, Test Wt.

Haye, KS - WSMV (visual ecreening, Dr. T.J. Martin, KSU)

Data generated in 1993:

Berthoud, CO - Yield, Test Wt., Height, Heading, Maturity, Lodging Severity, Coleoptile (grinhse), Leaf Rust (field & grinhse), Stem Rust (field & grinhse), Powdery Mildew, Tan Spot (grinhse), Hessian fly (grinhse) Nardin, OK - Maturity, Leaf Rust, Septoria, Tan Spot

Wichita, KS - Septoria, Tan Spot

Salina, KS - Yield Test Wi., Leaf Rust

mperial, NE - Yield, Maturity Geneva NE, - SBMV

lereford, TX - Heading, Shatter

Dumns, TX - Yield, Test Wt.

Hays, KS - WSMV (visual screening, Dr. T.J. Martin, KSU)

Data generated in 1993:

Berthoud, CO - Yield, Test Wi., Height, Heading, Maturity, Lodging Severity, Coleoptile (grahse), Leaf Rust (field & grahse), Stem Rust (field & grahse), Powdery Mildew, Tan Spot (grahse), Hessian fly (grahse) Nardin, OK-Yield, Test Wil., Malurity, Leaf Rust

Beloft, KS - Yield, SBMV

Salina, KS - Yield Test Wit, Leaf Rust

Boodland, KB - Yield, Test Wt., WSMV

Jroken Bow, NE - Yield

Alnden, NE - Ylek

mperial, NE - Yleki, Maturky

Geneva NE, - Yield, SBMV

Hereford, TX - Yield, Heading, Shatter Dumas, TX - Yield, Test Wt.

Hays, KS - WSMV (visual screening, Dr. T.J. Martin, KSU)

"The tenkings in the table, above are based on a scale of 1-9, where 1 and 9 represent the following extremes

		•
Test Weight	high	101
Heading	****	Inte
Anthesis	sacily	late
Haturity	SACLY	late
Colsoptile	long	# hort
Height	short	tall
Straw Strangth	atrong	Seak
All disease & insect rations	resistant	suscentible

EXHIBIT E.

STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

The variety for which Plant Variety Protection is hereby sought was developed by Dr. John Moffatt, employee of Agripro Seeds, Inc. By agreement between employees and Agripro Seeds, Inc., all rights to any invention, discovery, or developement made by the employee while employed by Agripro Seeds, Inc., were assigned to Agripro Seeds, Inc., with no rights of any kind pertaining to 'Rowdy' being retained by the employees.